

Listing of Claims

This listing of claims replaces all prior versions of claims in this application.

1. to 13. Canceled.

14. (Original.) A method of preparing a preserved biological material composition, comprising:

- (a) forming an aqueous preservation medium comprising (i) a biological material;
- (ii) at least one polyhydroxy compound, where the total amount of polyhydroxy compound in the medium is from about 5% to about 60% by weight of the medium; and (iii) phosphate ions, where the total amount of phosphate ions in the medium is such that the molar ratio of phosphate ions to moles of hydroxyl groups in the polyhydroxy compound is from about 0.025 to about 0.625; and
- (b) preserving the aqueous preservation medium using at least one preservation process.

15. (Original.) The method of claim 14, where the preservation processes are one or more processes selected from the group consisting of freezing, freeze-drying, ambient-air drying, vacuum-drying, and spray drying.

16. (Original.) The method of claim 14, where the pH of the medium is from about 5 to about 10.

17. (Original.) The method of claim 14, where the polyhydroxy compound is selected from a group consisting of monosaccharides, disaccharides, and polysaccharides.

18. (Original.) The method of claim 14, where the polyhydroxy compound is trehalose.

19. (Original.) The method of claim 14, where the total amount of polyhydroxy compound in the medium is from about 10% to about 30% by weight of the medium.

20. (Original.) The method of claim 17, where the total amount of polyhydroxy compound in the medium is from about 10% to about 30% by weight of the medium.

21. (Original.) The method of claim 14, where the molar ratio of phosphate ions to moles of hydroxyl groups in the polyhydroxy compound is from about 0.0375 to about 0.625.

22. (Original.) The method of claim 14, where the biological material is selected from the group consisting of cells, proteins, and enzymes.

23. (Original.) A method of preparing a preserved biological material composition comprising:

- (a) forming an aqueous preservation medium comprising (i) a biological material; (ii) trehalose, where the total amount of polyhydroxy compound in the medium is from about 5% to about 60% by weight of the medium; and (iii) phosphate ions, where the total amount of phosphate ions in the medium is such that the molar ratio of phosphate ions to trehalose is from about 0.2 to about 5; and
- (b) preserving the aqueous preservation medium using at least one preservation process.

24. (Original.) The method of claim 23, where the preservation processes are one or more processes selected from the group consisting of freezing, freeze-drying, ambient-air drying, vacuum-drying, and spray drying.

25. (Original.) The method of claim 23, where the trehalose is present in an amount from about 10% to about 30% by weight of the medium.

26. (Original.) The method of claim 25, where the pH is from about 5 to about 10.

27. (Original.) The method of claim 26, where the molar ratio of phosphate ions to trehalose is from about 0.3 to about 5.

28. (Original.) The method of claim 23, where the biological material is selected from the group consisting of cells, proteins, and enzymes.

29. to 45. Canceled.